

**Manns Harbor (B-2301)
Remediation**

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Coastal Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Roger N. Schechter, Director



December 12, 1996

Mr. Ted Devens, PE
NC Division of Highways
P. O. Box 25201
Raleigh, NC 27611-5201

Re: Dare County, Mann's Harbor Mitigation Site - CAMA Permit #27-92 - NCDOT TIP No. R-2304, B-2301, State Project No. 6-05900IT

Dear Mr. Devens:

I have inspected the Mann's Harbor mitigation site, Dare County in response to your letter to John Parker dated June 7, 1996. My visit revealed a strong Scirpus robustus (bulrush) stand on much of the mitigation site. However, there was also a significant stand of Phragmites australis (common reed) on a portion of the site. While the bulrush has similar value to black needle rush and sawgrass, common reed does not. Therefore, I must request the following:

1. On-site visit with NCDOT mitigation personnel;
2. Regrading of area vegetated with common reed;
3. Removal of existing mitigation site perimeter silt fence barrier; and,
4. Planting of appropriate marsh species.

At the on-site meeting we will flag the area to be graded, specify the final grade and specify marsh species to be planted (if needed).

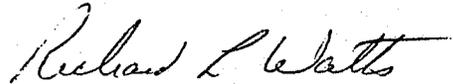
Mr. Ted Devens
December 12, 1996

Page Two

In summary, I do not accept this site as acceptable mitigation as it now appears. I believe however, we can fulfill our mitigation standards with relatively little time and cost.

I look forward to meeting with your staff at the site in the near future.

Sincerely,



Richard L. Watts
District Manager

RLW/dc

cc: J. Parker
R. Turner
File

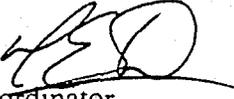
Discussion w/ Dave Lekson 9/25/96

- He asked for us to remove the silt fence on site
 - to enhance water movement
- Look to see if a small "lip" has formed @ fence - possibly break the lip
- Try to kill the ~~Phragmites~~ phragmites this summer
 - hopefully *scirpus robustus* will colonize densely enough to inhibit growth of phragmites

June 25, 1996

MEMORANDUM

TO: Randy Wise, P.E.
Roadside Environmental Unit

FROM: Ted Devens, P.E. 
Wetland Mitigation Coordinator

SUBJECT: Mann's Harbor Mitigation Site

Following our conversation last week, I left a message with David Lekson of USACE to discuss treatments for phragmites invasion of the Mann's Harbor site. This morning he called me back.

David pointed out that phragmites has established a "foothold" on site, particularly in areas where the elevation of the soil profile seems to be 3-4" higher. I informed him that you felt DOT could perform a herbicide application later this summer - most likely by wick application. We specifically discussed the use of Rodeo as an option.

David also asked that we remove the silt fences from site, as they inhibit the mobility of aquatic species, and may have caused a slight build-up of soil which has formed a "lip" at the fence. He is afraid that the "lip" may act as a shallow dike that prevents hydraulic connectivity of the site.

At your convenience, please coordinate a herbicide application to eliminate phragmites - while not harming the scirpus robustus. If in your opinion the silt fence is no longer needed, then please feel free to remove it. Also, please consider whether DOT should construct breaks in the "lip" to enhance hydraulic connectivity.

cc: David Robinson, Ph.D., P.E.
Don Lee



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

June 7, 1996

Mr. John Parker
N.C. Division of Coastal Management
P.O. Box 27687
Raleigh, NC 27611-7687

Dear Mr. Parker:

Subject: Dare County, Status on Mann's Harbor mitigation site. CAMA Permit No. 27-92.
NCDOT TIP No. R-2304, B-2301, State Project No. 6.05900IT.

In 1991, the North Carolina Department of Transportation (NCDOT) proposed the Mann's Harbor site as a marsh mitigation site for two projects in Dare County. Permit Condition No. 17 of the CAMA permit required that compensatory mitigation for the project be implemented in strict accordance with the "August 1991 Mitigation Proposal, U.S. 64/264 Improvements prepared for NCDOT by Environmental Services, Inc. in Association with Howard Needles Tammen and Bergendoff."

This mitigation proposal included the Mann's Harbor site, which was proposed for coastal marsh creation. The site consisted of an upland spoil area approximately 1.51 acres in size located next to SR 1105 near the entrance to the NCDOT port facility at Mann's Harbor. The site is adjacent to existing black needlerush/sawgrass marsh. Consequently, it was proposed that the site be graded to the surrounding marsh elevations and planted with Black needlerush (Juncus roemerianus) and Sawgrass (Cladium jaimensense). This was proposed as in-kind replacement of black needlerush marshes impacted by the projects.

Grading on the site was completed, and planting was scheduled to occur in the summer of 1995. However, in the spring of 1995, the site was naturally colonized by Scirpus robustus (Bulrush). By the time planting was scheduled to occur, it was observed that Scirpus provided 80-100% coverage throughout the site. Consequently, the NCDOT did not proceed with the planting as scheduled since the site had already been effectively colonized by brackish marsh vegetation.

NCDOT therefore requests DCM acceptance of Scirpus robustus at the Mann's Harbor mitigation site. Technically, this may constitute a modification to the mitigation proposal specified in Permit Condition No. 17. If you have any questions or need any additional information, please contact Mr. Rupal Shah at (919) 733-7844 ext. 315.

Sincerely,

Ted Devens, PE
Wetland Mitigation Coordinator



**Manns Harbor
Background Information**

Mitigation Update for B-2301 and R-2304

Open Water ImpactMitigation Sites**Site 1: Whalebone Junction****Acreage:** 0.9 acres**Action:** Creation, shrub-scrub wetlands**Plants:** Wax myrtle, Sea-myrtle, and Yaupon**Planting scheme:** Random planting of wax-myrtle, sea-myrtle, and yaupon. Total of 392 plants.**Status:** Will be updated by Randy Wise.

B-2301

Site 2: Mann's Harbor**Acreage:** 1.51 acres**Action:** Creation/restoration, emergent, brackish water marsh.**Plants:** Black needlerush (*Juncus roemerianus*), Sawgrass (*Cladim jaimensense*)**Planting Scheme:** 16,445 plants. 50:50 scattered mix of black needlerush and sawgrass planted on 2' centers.**Status:** Site consists of brackish marsh mitigation. Scirpus robustus began to naturally regenerate and currently (August 1995) consists of 80-100% coverage on site. REU decided not to plant *Juncus roemerianus* and *Cladim jaimensense* because of the Scirpus robustus growth. Letter explaining proposal was sent to Frank Vick with attention to Stephanie Briggs. No mention of whether this new proposal was ever agreed upon by either CAMA or P & E Branch. Letter sent to John Parker of DCM stating a proposed modification of the permit and mitigation plan.**Site 3: Pea Island****Acreage:** 5.58 acres (3.98 acres for US 64/264 mitigation, 1.60 acres for terminal groin mitigation)**Action:** Creation, emergent, freshwater/brackish wetlands.**Plants:** Bulrush (Scirpus robustus)**Planting scheme:** 27,007 plants planted on 3' centers.**Status:** Active project with REU. Planted in July of 1995, however, exact area not known when planting was done. Water level was too high to accurately determine the acres needed for planting. Some planting done in the water near proposed planting area. Will go back in the fall of 1996 and check the planted area. It could possibly be short of the goal needed.



Doucy
B-2024

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

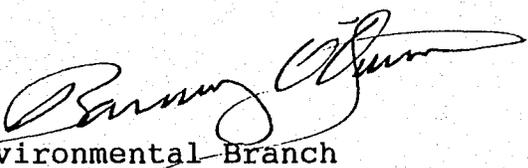
JAMES B. HUNT, JR.
GOVERNOR

DIVISION OF HIGHWAYS
P.O. BOX 25201, RALEIGH, N.C. 27611-5201

R. SAMUEL HUNT III
SECRETARY

August 18, 1994

MEMORANDUM TO:) Sandy Nance

FROM: Barney O'Quinn 
Planning and Environmental Branch

SUBJECT: Oyster habitat creation agreement

Enclosed please find correspondence from Mr. Mike Marshall of the N.C. Division of Marine Fisheries. Mr. Marshall has requested the second half of the funds required to complete this mitigation effort. I would like to request that you initiate the transfer of funds as required by this agreement.

If you have any questions concerning this issue, please contact Mr. Doug Huggett at 733-3141.

cc: Cyndi Bell
Doug Huggett



MEMORANDUM

TO: B. J. O'Quinn
FROM: Mike Marshall *MSM*
DATE: August 9, 1994

~~SUBJECT: Completion of the Dare County Mitigation Project~~

The second half of the funds for oyster habitat creation in Dare County is requested as per the attached agreement. The work is currently underway and should be completed during FY94-95.

/dh

cc: Bob Jamieson
Judy Powell
Nadine Stoddard

NORTH CAROLINA
DARE AND CURRITUCK COUNTIES

NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION

REIMBURSEMENT AGREEMENT

AND

PROJECT: B-2301
B-2024
R-2418
R-2304

DEPARTMENT OF ENVIRONMENT,
HEALTH AND NATURAL RESOURCES

THIS AGREEMENT, made and entered into this the 5th
day of March, 1993, between the DEPARTMENT
OF TRANSPORTATION and the DEPARTMENT OF ENVIRONMENT, HEALTH
AND NATURAL RESOURCES, both agencies of the State of North
Carolina, hereinafter referred to as DOT and EHNR
respectively;

W I I N E S S E I H:

WHEREAS, the DOT has three construction projects
in Dare and Currituck Counties which mitigation by oyster
propagation has been proposed to offset various environmental
impacts caused by unavoidable highway projects by DOT;

WHEREAS, at the request of DOT, EHNR has agreed to
assume responsibility for this work subject to reimbursement
by DOT as hereinafter set out.

NOW, THEREFORE, the parties hereto, each in
consideration of the promises and undertakings of the other
as herein provided, do hereby covenant and agree, each with
the other, as follows:

1. The following DOT projects require oyster propagation for mitigation purposes:

(A) Dare County - Project ~~B-2301/R-2304~~, Improvements to US 64/264 from NC 345 to US 158 at Whalebone Junction, including approaches to Roanoke Sound (Washington Baum) Bridge (State Project: 6.059001T) - 8.26 acres

(B) Dare County - Project B-2024; Replacement of Bridges #5 and #6 over Colington Cut and Colington Creek on SR 1217 (State Project: 8.1050301) - 2.40 acres

(C) Currituck and Dare Counties - Project ~~R-2418~~, Bridge across Currituck Sound on US 158 (State Project 6.041005) - 5.48 acres

2. EHNR shall be responsible for the following activities to meet mitigation requirements:

(A) All mitigation shall consist of shell planting for oyster spat attachment.

(B) It is anticipated that it will require two (2) summer seasons to establish the required acreage.

(C) It is estimated that this work will require 80,000 bushels of cultch material (material for spat attachment)(16 acres x 5,000 bushels/acre).

(D) Marl may be used as a substitute due to available supplies of cultch.

3. All work shall be done in accordance with state standards and specifications to meet the conditions set forth in the environmental permits for these projects.

4. DOT shall reimburse EHNR \$82,400 for the cost of this work. Reimbursement shall be in two (2) equal payments with the first payment paid within thirty (30) days of the execution of this Agreement and the second payment to be made July 1, 1993.

IN WITNESS WHEREOF, this Agreement has been executed, in duplicate, the day and year heretofore set out, on the part of DOT and EHNR by authority duly given.

ATTEST:

DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

Lynn Lee

BY: David A. Dawson

Director

TITLE: Div. of General Services

DEPARTMENT OF TRANSPORTATION

BY: W. G. Manly, Jr.
STATE HIGHWAY ADMINISTRATOR

APPROVED AS TO FORM

BY: James E. McGovern, Jr.
ASSISTANT ATTORNEY GENERAL

CCI: BJO/Burton



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
P.O. BOX 25201
RALEIGH 27611-5201



JAMES G. MARTIN
GOVERNOR

DIVISION OF HIGHWAYS

THOMAS J. HARRELSON
SECRETARY

May 11, 1992

WILLIAM G. MARLEY, JR., P.E.
STATE HIGHWAY ADMINISTRATOR

MEMORANDUM TO: Mr. C. O. White, P.E.
Division Engineer - Division 1

FROM: W. D. Johnson *[Signature]*
State Roadside Environmental Engineer

SUBJECT: Wetland Mitigation Planting for Project R-2304
(8.7051301) in Dare Co.

According to the plans and permit on the subject project, the Division forces will be performing the wetland mitigation planting located at three separate locations. This includes two off-site locations to be planted concurrently with the project. The on-site location is at the Whalebone intersection in Nagshead. The two off-site locations are at Manns Harbor and Pea Island Refuge, as shown on the detail sheets.

We recommend that this work be done as early in the contract as possible to make sure that all the work can be done while the work order is active.

If a monitoring or maintenance period is needed, additional funds may need to be requested for a continuation of the project or establishment of an appropriate work order.

WDJ/RDK:vs

cc:

- Mr. B. G. Jenkins, Jr, P.E.
- Mr. Len Sanderson, P.E.
- Mr. Jack Ward, P.E. ✓
- Mr. Harry Thompson. P.E.
- Mr. E. F. Vernon
- Mr. J. E. Benton